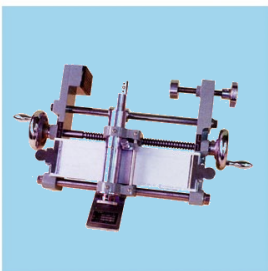
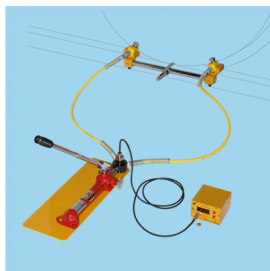


# Instruments for Railway

(Measuring instrument for vibration and wheel of railcar)



# CATALOG



**SHINYEI TECHNOLOGY CO., LTD.**



## Testing and Measuring Technique for Safety and Reliability of Product and Distribution

We, SHINYEI TECHNOLOGY CO., LTD., provide drop tester for packaging freight, shock testing system to determine to product reliability and measurement instruments in the distribution field which has launched since 1946 as Yoshida Seiki corporation.

Recently, the risk of damage to the mobile products or packaged freight during distribution or usage situations has increased, because of the variety of mobile products that have been developed, the diverse delivery system used in wide-spread internet shopping. In these circumstances, to improve product and packaging design, we provide services such as drop/shock testing systems, technical seminars and consulting services.

We contribute to building an affluent society by bringing you safety and reliability with our products and services based on the accumulated achievements and testing expertise.



# Company Profile

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Foundation	October 2019
Capital	400million yen



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# Measuring Instruments for RAIL WAY

# UHA series

## Vibration Recorder for the railway vehicles

### UHA-2, UHA-3

UHA can measure the vibrations on the railed vehicles to evaluate the rail road track conditions and to maintain the railed vehicles. Vibration data is recorded real-time, processing to a PC card and can be printed it out. Also, data is analyzed via specialized PC software .



### Features

- Acceleration data is measured by strain gage pick-up at 12 bit resolution.
- Digital vibration data is recorded to the printed form as analogue data real-time.
- Data over the threshold is shown via LCD on the device.  
Those data can be transferred to PC by USB cable or printed out.
- Optional markings, kilometer-point and speed, is printed on the paper every 100m or 1km.  
It can also be typed by the remote-switch.
- All measurement conditions setup like start-stop is operated by its keyboard.
- Data of each time or distance is recorded to PC card.  
Data viewing and analysis is performed by analysis software.

Specification	UHA-2	UHA-3			
Model	UHA-2	UHA-3			
Measurement Direction	2 axis (vertical / horizontal)	3 axis (up / down, right / left, front / rear)			
Printer	sensible heat recording by thermal head				
Measurement Acceleration	Select by key operation				
	Acceleration range (G)	0.25	0.4	0.5	1.0
	Record speed (mm/s)	100	70	40	20
Printed Form Speed (mm/s)	5 / 10 / 20 selectable				
Data	kilometer point threshold of over-data, vibration value, speed				
Filter (Hz)	low-pass fo = 10, high-pass fo = 0.3				
Printed Paper	scaled roll paper W112mm × L40m				
Keyboard	number and operation key (total 20 keys)				
LCD	240 × 128 dot with back light				
Communication interface	USB				
Input Signal	tachometer generator (1 to 999 pulses / 1 rotation), remote-switch				
Power	internal battery and AC adapter				
Size (mm)	W240 × D300 × H130				
Weight (kg)	about 3.0				
PC card	64MB compact flash				
Memory unit	distance mode (0.25m) / time mode (5ms)				
Memory Volume	distance mode(999km) / time mode (about 5.5hours)				
Battery Charge	Chargeable with AC adapter (only when main unit power supply is off)				

# Digital Wheel Diameter Measuring Instrument

# TY-50D

For the operation safety of trains, the diameter of the tire is a critical parameter to be maintained. TY-50D with 7seg LED display is simple in construction to measure the diameter of wheel. Also the magnets can attaches to wheel supports easy to measure.

## Features

- Wheel diameter can be calculated from 3 inner diameter position of wheel
- LED display with double side makes easy to check the measurement result
- Measurement support by magnet



## Specification

Model	TY-50D
Range of measurement (mmφ)	670~945
Accuracy (mm)	±0.2 (@25°C)
Measurement	Attachment style displacement sensor
Position of measurement	65mm outside the tyre inner side surface
Flange height limit (mm)	37
Display	7seg LED (double side) resolution 0.1mm
Memory size	128 data
Battery / Battery life	nickel metal hydride type rechargeable battery / 6 hours max.
Operational temperature	0~45°C (10~35°C when battery charge)
Size (mm)	W300×D136.5×H227
Mass (kg)	2.3

# Measuring Instruments for RAIL WAY **TY-50** series

## Wheel Diameter Measuring Instrument

### TY-50

For the operation safety of trains, the diameter of the tire is a critical parameter to be maintained. TY-50 is very simple in construction to measure that very parameter and the diameter can be known at sight. You can use this instrument even in the narrowest of sites due to the diameter scale displayed on both sides. This can be attached to the measured flange with the magnet .

### Features

- High accuracy by optical encoder
- Applicable to various tire range
- Direct reading with two-side dial gauge
- Easy-treatment of weight and design
- Simple usage in the analogue construction
- Measurement support by magnet

### How to use

1. Set TY-50 along the inside of tire by magnet.
2. Slide TY-50 toward center of tire.
3. Read the diameter from dial gauge.

\*to measure accurately, average of 3-points of measurements is recommended.



### Specification

Model	TY-50
Range of measurement (mmφ)	760 to920 (Different specifications are available on request)
Measurement error (mm)	Within ±0.5
Dial gauge	80φ, two-side indication type
Graduation	Direct reading, in 1 mm unit
Position of measurement	65 mm outside the tire inner side surface (Different specifications are available on request)
Flange height limit (mm)	37
Fixing method	Magnetic absorption to the tire inner side surface
Mass of Instrument (kg)	2.1

# Measuring Instruments for RAIL WAY

# TWL series

## Wheel Weighing Machines

### TWL-1, TWL-2, TWL-auto

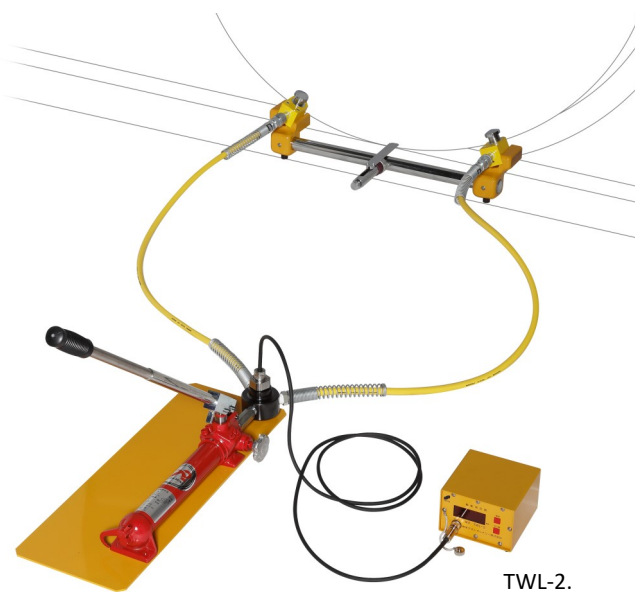
TWL series can measure wheel loads on the track of any kind cars to keep the bilateral weight balance of the train and cargo. Manual operation model with An analog dial scale as TWL-1, a digital scale with red LED as TWL-2 are listed, fully-automatic operation model TWL-auto also.

### Features

- High accuracy by load cell
- Applicable to various tire range
- Direct reading with dial gauge (TWL-1)
- Bright display with LED display (TWL-2)
- Fully-automatic operation model with touch-panel display (TWL-auto)
- Easy-treatment weight and design
- Simple usage via specialized construction

### How to use

1. Set the guide shaft under the tire.
2. Apply hydraulic pressure by hydraulic jack.
3. Lift up tire until indicator slides between rail and tire.
4. Read the number from display.



### Specification

Model	TWL-1	TWL-2	TWL-auto
Wheel load (kN)		82 max.	60 max.
Measuring range of wheel diameter * (mmφ)		760~860	690~920
Hydraulic pressure (MPa)		76 max.	76 max.
Measurement graduation (kN)	2.0	0.1	
Indicator	Dial graduation	3-digits LED	Touch panel
Capacity (kg)	15	16	15 (Body) 8 (electric pump)

\* (Available for customization) The above are standard specifications. Please contact us if you have any request to customize.

# Measuring Instruments for RAIL WAY

# TOD-500

## Digital Tire Measuring Instrument

### TOD-500

TOD-500 is successor model of TOD-400 and can measure the flange height and its thickness (or the distance from the center of axis simultaneously) showing in digital. By installing LED displays on both sides of its body, measured value can be captured easily. Also its LED displays can show results even in dark place.

#### Features

- Measurement range of flange height 25~40mm
- Selectable 3 models (depends on measurement range)
- Double sides displays
- Memory size 128 data
- Continuous measuring (Max 6 hours) by rechargeable battery
- Battery alarm function equipped



#### Specification

Model name	TOD-500
Measurement distance (mm)	15
Measurement range (mm)	<ul style="list-style-type: none"><li>• Flange height 25-40</li><li>• Distance from axis center</li></ul> [Type I] 516~531 [Type II] 701~716 [Type III] 21~36 (Flange thickness)
Thickness of wheel (mm)	25-125 (0-100 model selectable)
Reference point (mm)	65mm from inside wheel
Measurement point (mm)	10 or 13
Measurement principle	Contactable Angle Sensor
Display	7 segments LED (Both sides)
Measuring resolution (mm)	±0.1
Measuring point (mm)	65
Measurement position (mm)	10 or 13
Data output	Date / Vehicle No. / Wheel No. / Distance from axis center / Flange height
Memory capacity	128 data
Power supply	Ni-MH rechargeable batteries *Rechargeable via USB cable
Battery life	About 6 hours
Size (mm) / weight (kg)	W245×D179.5×H37.5 / 1.2



# Measuring Instruments for RAIL WAY

# TS-3D

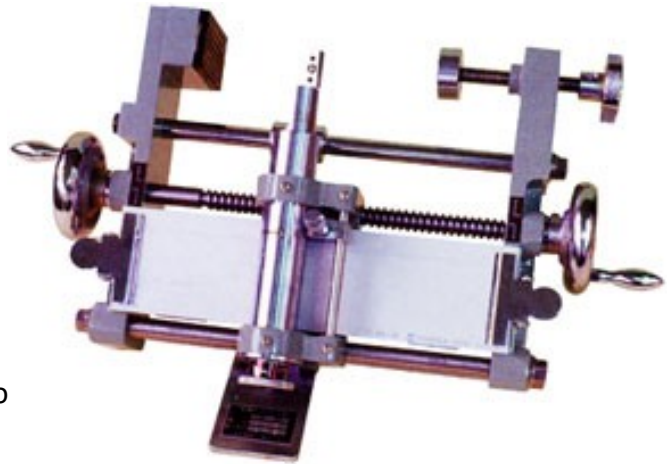
## Wheel Abrasion Tester

### TS-3D

TS-3D can record the wheel tread surface shape not only from wheels removed from the vehicle, but also from those still fitted in.

### Features

- Easy and accurate fitting to wheel.
- Stylus and record pen are connected, so there is no error between original and recorded shapes.
- Recording pen uses a ballpoint pen readily available on the General market, so replacement is easy.



### Specification

Model	TS-3D
Wheel diameter (mm)	800 × 950
Wheel width (mm)	125 ~ 135
Volume (mm)	W338 × D252 × H200
Mass of instrument (kg)	3.5

## Measuring Instruments for RAIL WAY

# Back Gage

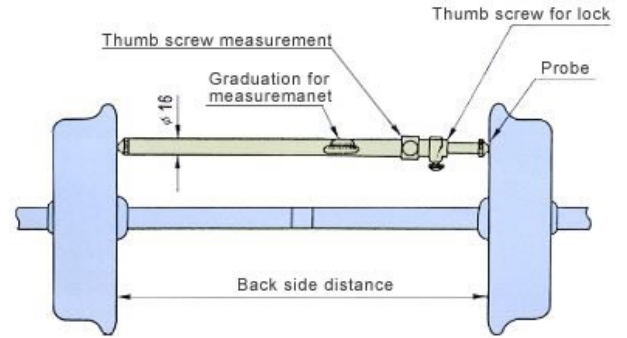
### Railway Back Gage

41022, 41023

Back Gage provides easy measuring of back side distance.

#### Features

- Easy measuring of back side distance.



#### Specification

Model	41022	41023
Range of measurement (mm)	982 to 1002	1350 to 1370
Accuracy of measurement (mm)	$\pm 0.1$	$\pm 0.1$
Capacity (g)	750	950

## Measuring Instruments for RAIL WAY

# OCH-3

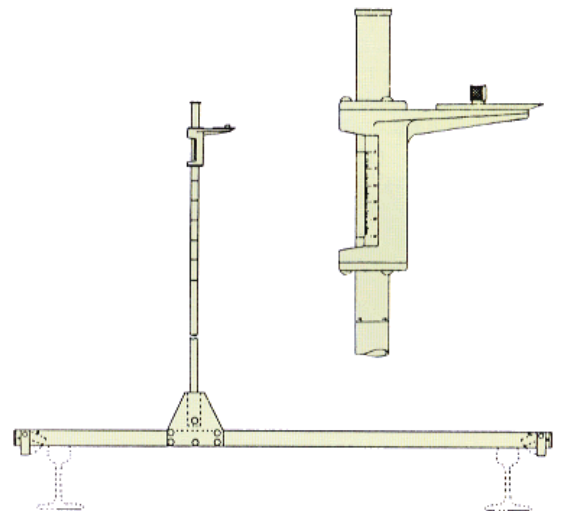
### Railway OCH-3

OCH-3

Lightweight measuring instrument OCH-3 can measure height of the coupler on the operating rail track.

#### Features

- Measures the height of the coupler of articulated vehicle.
- Constructed of light weight ridge aluminum is apply to the instrument.
- Measuring rod can be fold for easy carrying.
- Measurement gradation is easy to read with 1mm scale spacing.



#### Specification

Model	OCH-3	
Range of measurement (mm)	700 ~ 1100	
Line width (mm)	1435	1067

# Measuring Instruments for RAIL WAY

# FG-2

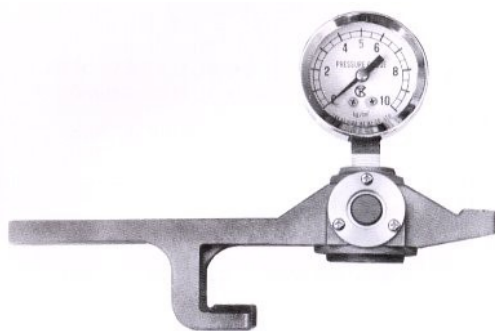
## Portable Pressure Gauge for Railway Equipment

### FG-2

FG-2 can measure the air pressure of railway equipment easily.

### Features

- Easy-inspection of pneumatic braking by fitting on air horse couple.
- Relative air pressure 0.5 MPa (5kg / cm<sup>2</sup>), scale are identified in red.
- At the push of a pressure-reducing valve releases the air easily.
- Body casted from stainless steel and copper with to prevent corrosion prevention and is compact.



### Specification

Model	FG-2
Range of measurement (MPa)	0 to1 (0 to10kg/cm <sup>2</sup> )
Weight (g)	about 500

# Measuring Instruments for RAIL WAY

# OS series

## Oil Syringe for Railway

### OS-A, OS-B

Scaled cylindrical Lubricator oil syringe OS, tips of the filler, offered in 2 types. Straight and curved type.

### Features

- Hard transparent plastic pipe is used for the Lubricator.
- Amount of oil to lubricate the components is always supplied with a determined amount guided by the scale of the cylinder .



### Specification

Model	OS-A	OS-B
Filling shapes	curved	straight
Volume (cc)	200	



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